

ABSTRACT

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Weather vane for measuring the orientation of the wind,
with built-in heater

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Knowledge of the parameters regarding the lift and
angle of attack is necessary for aircraft safety. The
use of a weather vane (1, 2) makes it possible to
measure the orientation of the wind (6), from which
10 these two parameters are calculated. The weather vane
is an element external to the aircraft, and is made up
of a vane (2), which is an element sensitive to the
wind. The reliability of this weather vane depends
directly on its geometry. A device to make it possible
15 to heat the vane of the weather vane is proposed. A
heater (4) is inserted via a base (1) of the vane which
is not exposed to the external conditions. In addition,
the heater is slaved to the external climatic
conditions, and tailored to the temperature gradient
20 observed on the vane.

Figure 1

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(57) Abstract

It is very important to know the parameters concerning lifting capacity and angle of attack to ensure an aircraft safety. Hence the use of a vane (1, 2) enables to measure wind orientation (6), wherefrom is derived the computation of those two parameters. The vane is an element external to the aircraft, and consists of a blade (2), an element which wind-sensitive. The reliability of said vane is directly dependent on its shape. The invention concerns a device for heating the vane blade. A heater (4) is inserted by a base (1) of the blade unexposed to outside conditions. Moreover the heater is automatically controlled by external climatic conditions, and is adapted to the temperature gradient observed on the blade.

